The
REPEATER JOURNAL

CAROLINAS – VIRGINIA REPEATER ASSN., INC.
ORGANIZED 1971

August 1, 1975 Volume 4 No. 3

THE PRESIDENT'S COLUMN
Ed Alderman, WA4PEN

The CVRA has had a good year so far. Within the three state teritory there are 86 repeaters in operation or getting ready. Most of these repeaters are members of CVRA. The new organizational structure seems to be functioning well. It is an excellent concept.

Communications between officers, directors, and committee chairmen has probably been our biggest problem. This sounds strange when one realizes our prime function is communication. Hopefully this problem can be resolved with the linking of 6 or 2 meter repeaters, which is now legal. The Board of Directors will be discussing this matter to some extent at the Shelby Hamfest meeting on August 30.

Your officers and directors have done a good job this year in spite of the fact that most of them were handling new responsibilities that they were not always sure were part of their job.

I hope each of you is as pleased with the CVRA "Journal" as I am. Numerous authorities have reminded us, although it really wasn't necessary, that ours is the best publication of its kind in the country. Your Editor, Bill Parris, K4GHR, has made us highly visible nationwide.... thanks for the tremendous job Bill!!!

We have all enjoyed the high level of co-operation and enthusiasm that the membership has given. Since our terms of office will be over December 31, 1975, (Only the officers, not the Directors) I want to encourage you to consider some of the following ways you can help make our Association better:

1. Get involved and support the CVRA
2. Prepare a Technical article for the "Journal".
3. Send news items to the Editor
4. Advise as to repeater changes of any kind.
5. Solicite Advertisements for the "Journal".
6. Volunteer to serve on the Technical Committee.
7. Strive for 100% local club membership in CVRA - it is well worth it.
8. Help devise an effective repeater linking plan for our area. It is badly needed for local and regional emergencies. We certainly need some EC input here.
9. Send your comments concerning FCC Dockets to our FCC Liason Representative, Don Harris, W4BUZ. Don has done an excellent job, but he has indicated that he has received no input from any officer, director, or member. He needs to know your feelings so that he can appropriately establish the position for the Association.

(cont'd page 2)

REPORT FROM THE SOUTHERN DISTRICT

Director: Hugh Minton, K4FR 44 Longwood Dr. Aiken, SC 29801
Vice Dir: Cliff Semken, K4OKD 436 Wallace Dr, Charleston, SC 29412

(CHARLESTON, SC) ..... WR4AFX, 34/94, and 449.10/444.10. The 450 mHz machine will be on the air as soon as the feed line is installed. The 2 meter repeater continues to offer good service. The two meter repeater is a whistle up machine, but after it is up, it is carrier accessed for 15 seconds. (tnx WB4GPS)

(CHARLESTON, SC) ..... A machine will be installed on 16/76 on the former Navy aircraft carrier "Yorktown", which will be the focal point of the South Carolina Navy Museum. Work will begin on the repeater near the end of the year. The antenna will be on top of the mast, which will be 190' above the water. The carrier will also be equipped with a low band station. (tnx WB4GPS)

(BEAUFORT, SC) ..... The Coastal Amateur Radio Association (K4KBI, WB4PVL, and crew) have their repeater about ready to go on 31/91. The ETV tower will be erected late in August with the 2 meter antenna attached shortly thereafter. This should fill the gap along I-95 between Savannah and Charleston very nicely. (tnx WB4GPS)

(ORANGEBURG, SC) ..... Ken Neidig, K4IPG, has requested a two meter frequency for a repeater for the Orangeburg area. No further details.

(SUMTER, SC) ..... A proposed repeater here on 87/27. It has been indicated that Larry, WB4THE, and a few others have been considering installing a repeater------ don't know if the 87/27 effort is theirs or not.

(AUGUSTA, GA) ..... WR4ALS, 90/30. Homer Connell, W4DDY, has written to ARRL requesting some help on resolving the problem between the 90/30 repeater in Augusta and the 24/90 machine near Charlotte operated by K4ETZ. The Augusta machine has its receiving antenna at a low elevation at present, but has plans to place it in a permanent location much higher in elevation in the very near future. With the North Carolina repeater outputting on 90, the Augusta machine is continually keyed up. K4ETZ has ignored the recommended band plan by not using the standard 600 kHz spacing, and by using low in/ high out, rather than the other way around. When contacted by the Augusta group, K4ETZ's response was that his repeater was put on that frequency (24/90) and that it would remainthere, regardless of how much QRM it caused to others. The CVRA has become involved, but chances of any reasonable solution to the problem are slim..... some folks just want the FCC to get involved don't they ? (tnx W4DDY)

(SAVANNAH, GA) .... WR4AKO/4, 28/88, is presently operating from atop the Chatham Apartments (15 story building). This license belongs to Phil Konter, K4GCU, the club Treasurer, and is being operated portable awaiting the permanent club call. The Savannah Repeater Association is a subsidiary of the Amateur Radio Club of Savannah, and presently has 26 members. The group has been asked to join the CVRA. (tnx WB4LWX)

(COLUMBIA, SC) ..... The Carolina Repeater Club, sponsor of WR4ACD, 34/94, is planning on another repeater for 146.96/147.36. No more details available. (tnx K4AVU)

Report from the President..... cont'd from page 1

I feel strongly that we have perhaps more than our share of talent within the CVRA territory. Please don't wait for someone to knock on your door -- step out and volunteer for some of these, or other, jobs that need to be done. Let's make a special effort to help make our Association even better.

REPORT FROM THE PIEDMONT DISTRICT

Director: W4BUZ Don Harris Rt 11, Box 160 Greensboro, NC 27410
Vice Dir: W4IRE John Huffman 2400 Hoyt St. Winston-Salem, NC 27103

(LENOIR, NC) .... WR4ACM, formerly on 25/85 will be shifting frequency to 93/33. The machine will be located at the same site but will be owned and operated by Bud Ayers, WB4QWC, Gary Hartley, K4HWT, and one other party. The 25/85 machine will be shifted to a new location in the Morganton/Hickory area as best can be determined.

(WINSTON-SALEM, NC) .... Charles Link, WA4NMF, is planning on a repeater on 87/27 to be located on Sauratown Mountain, just North of Winston. tnx WA4WTX

(WINSTON-SALEM, NC) ... Beacham Leonard, W4RXG, is constructing a repeater to be located on Sauratown Mountain at the ETV station site. Frequency will be 448.00/443.00. tnx WA4WTX

(GREENSBORO, NC) ..... The CVRA welcomes as a new member The Greensboro/ Guilford County Civil Prepardness Repeater Association and its new (or not so new if you have already worked through it) repeater on 147.72/12-- WR4ANP. The machine is a splite site arrangement with the receiver located on the Muir's Chapel water tower and the Transmitter in the Governmental Center in downtown Greensboro. Equipment is all GE with solid state controls added by the group. Repeater WR4ANP is presently running about 110 watts ERP. Mobile coverage is over 30 mile radius. The machine may be carrier accessed, and will be used for civil emergencies if need be, but feel free to use the repeater anytime. The group will welcome anyone checking into the G C PRA Net at 2100 EDT on Thursdays. Code Practice is offerred on Tuesdays and Thursdays at 2030 EDT. tnx WB4EXW.

(HICKORY, NC) ..... A repeater on 25/85 is in the testing stage here. The machine will be located on Barrett's Mountain, 20 miles NE of Hickory, in Alexander County, and is sponsored by the Unifour Amateur Radio Association. Trustee is WA4MDW. A six meter repeater is in the proposal stage from this location also. tnx K4DJ

(SALISBURY, NC) ..... There will be a family picnic and Open House at the Salisbury Repeater Site, WR4AAA, 13/73, on Sunday, August 17, at 1330. Everyone should bring their own picnic lunch where it will be spread with everyone elses. A series of displays will be set up and the completely new solid state repeater should be operational by then. Recently a new 100' tower was installed at the site with a Stationmaster on top for transmitting, and two Cushcraft AFM-4D arrays 25' below the top for receiving. The tower was donated to the club by WB4KXX. tnx WB4SNA

"THE REPEATER JOURNAL" ..... is published four times a year for members of the Carolinas-Virginia Repeater Association, Inc.

Permission is granted for quoting from "THE JOURNAL" provided credit line is given.... a copy to the Editor would be appreciated.

Deadline for all copy and Advertisements is the 20th of January, April, July, and October. The Editor reserves the right to reject, edit, or delete portions of copy submitted. Advertising rates are available from the Editor. Address all correspondence to: 6210 Gothic Ct., Charlotte, NC 28210.

This newsletter is swapped to other Repeater Councils for copies of their newsletters.

"THE REPEATER JOURNAL" has a circulation of 1000 copies, and is entered as Second Class Mail at the Post Office in Burlington, NC 27215.

UNIDENTIFIED SIGNAL - SUCCESSFUL HUNT

Shortly after 2200 on Friday, July 18, an unmodulated steady carrier appeared on the input frequency of the Salisbury Repeater, WR4AAA. This occurred during operation of the Central North Carolina Traffic Net and the net was quickly brought to a close as the repeater "timed out" after three minutes.

The carrier on 146.13 remained steady as several fixed stations obtained beam headings and ran triangulations to establish the approximate location of the unidentified signal. Several mobiles in the Salisbury area made preliminary checks and concluded the signal was not coming from the Rowan County area.

As time passed, a number of "die-hards" decided to flush-out the source of the signal. The final team included three mobiles and two fixed stations who tracked the signal through the countryside.

After finally finding the house, it took another hour to establish whether or not an amateur lived there, and if so, who. At that hour of the morning, we were a little reluctant to go banging on the front door. Checking off the names of active amateurs in that town versus the telephone book, finally matched an amateur with that particular address. He was telephoned and told of the problem, where upon he staggered from the bedroom into the shack and turned off the transmitter.

This was purely an accidental act on the part of the amateur who appologized for the inconvienience caused by the incident.

This was the second occurance of this type of incident on the Salisbury Repeater during the past four years -- and both incidents, involving two different amateurs, involved the same type of transceiver----- an IC-21.

The IC-21 front panel contains two rocker switches located side by side. One is for turning the power to the transceiver on and off. The other, which is labeled "R" and "T", happens to be a receive/transmit switch, a feature not found on many two meter commercial rigs. It apparently is easier than the manufacturer expected for someone to strike the R/T switch, rather than the Power Switch, thinking that the unit had been turned off --- but in fact keying the transmitter. I know of one IC-21 that now has the keying line disconnected from the switch -- and possibly one more fellow thinking about the same modification.

This particular search finally ended in a town over 22 miles from the repeater. Initially assisting in the search either as fixed or mobile stations were WB4SNA, WB4RGS, W4PJO, K4PAJ, K4BEC and K4EYF. The crew to finally pin point the source included W4IPP and WB4VNZ operating fixed stations, and W4NZJ, WB4AQS, WA4TDL, and K4GHR in the three mobile units.

AMATEUR RADIO DAY IN CHARLOTTE will be Saturday, Sept 27. A joint venture by the Mecklenburg Amateur Radio Club and the Charlotte Radio Club, four (4) operational stations with appropriate displays will be set up at the four largest shopping centers - Eastland Mall, South Park, Freedom Mall, and Charlottetown Mall. Mayor Belk will officially declare "Amateur Radio Day" in Charlotte, and there will be extensive publicity aired over the local radio stations and TV stations. Brochures on Amateur Radio will be available for all visitors with invitations for persons to join future Novice classes sponsored by both clubs.

HAMFESTS..... in the future: Shelby, NC, September 1, 1975; Rock Hill, SC, October 5, 1975; Charlotte, NC, March 28, 1976.

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RPT220 Kit	220 MHz – 15w – complete	364.95
RPT432 Kit	NEW–10 watt–432 MHz repeater	399.95
RPT144	NEW – 15 watt – 2 meter repeater – factory wired	595.95
RPT220	NEW – 15 watt – 220 MHz repeater – factory wired	595.95
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ATTENTION DIRECTORS/VICE DIRECTORS/OFFICERS/COMMITTEE CHAIRMEN

CVRA BOARD MEETING ANNOUNCEMENT

There will be a meeting of the Board of Directors of the CVRA at 1330, Saturday afternoon, August 30, 1975, in the main building at Cedar Park, the Shelby Hamfest Site, located north of Shelby near Casar. This is the Saturday of the weekend of the Shelby Hamfest.

All Directors should make every effort to attend. If you do not plan to be there, make sure the Vice Director from your District is present. Please confirm to the President, Ed Alderman, WA4PEN, NLT August 25, your plans--either you can, or cannot be there. And if you cannot be there, is your Vice Director going to be able to come? Likewise all Officers, Vice Directors, and Committee Chairmen should let Ed know there plans.

This is a regularly scheduled "Business Meeting" for the Directors. All members of the Association, Repeater Representatives and Associate Members, are invited to attend the meeting, however, the business will be conducted by the Board. We hope the attendance will be large.

The tentative agenda includes:

1. Reports: (no more than 3 minutes, please)

   Officers and Committee Chairmen:

President	WA4PEN	Frequency Coordinating Com.	WA4WTX
Vice President	WB4DBB	FCC Liason	W4BUZ
Secretary	W4WDI	Newsletter	
Treasurer	K4CAW	Editor	K4GHR
Associate Membership	W4IZI	Technical Editor	WB4EXW
Repeater Membership	WB4LWX		

   Directors: (by either the Director or Vice Director)

Bay	WA4MMP/WA4JZX	Northern	K4ARO/K4PQD
Central	K4WHQ/WB4NDB	Piedmont	W4BUZ/W4IRE
Coastal	WA4UQC/W4NTQ	Southern	K4FR/K4OKD
Eastern	WA4WTX/K4ITL	Western	WB4ROI/WA4NUO
Mountain	WB4MOV/W4PDL		

2. Break for 15 minutes

3. Old Business
   a. Frequency Coordination & Control Procedures
      See page 34 of May 1975 "The Repeater Journal"
      Includes such areas as spacing between repeaters, arbitration, and how long should a frequency be "held" for a repeater?
   b. Comments concerning ARRL Band Plans for 50 and 450 mHz
      See pages 24/25 of the May issue
   c. Technical Committee formation
   d. Nominating Committee for 1976-78 Officers
   e. Other

4. New Business
   a. Tertiary Repeater Channels (ie 15 kHz Channels, or "splinters")
      See article in this issue
   b. Base Station Use of Repeaters - Policy Statement?
      Should the CVRA adopt a policy similar to the Florida Repeater Council on this matter? See article in this issue.
   c. Meetings of Repeater Reps Within a District
      Are there meetings being held within the Districts? Should District Meetings be held? If so, when, where, etc?

5. Open Comments from the General Membership

6. Adjournment before 1800 hours.

Reports which are indicated as the first item on the agenda should be "business type" reports enumerating problem areas, comments from the members concerning policies, procedures, etc, recommendations for additional items to be added to the agenda as old or new business, etc. Reports from Committee Chairmen should include status reports, growth rates in their particular areas, accomplishments, and potential problem areas. These reports should not be devoted to talking about new repeaters that are on, or local club activity.

At the "Break" after the reports, the Agenda for the remainder of the meeting will be finalized and the items listed on a blackboard.

This is a very important meeting as you can very well see. Please attend and bring your constructive propositions with you. It is necessary that each Director familiarize himself with each subject on the agenda prior to the meeting. Otherwise the meeting will surely drag out into an uneventful afternoon. Please review the CVRA Constitution and By Laws, and articles in the last three issues of "The Repeater Journal" prior to the meeting.

Members-- both Repeater Representatives and Associate Members -- should contact their appropriate Directors prior to the meeting to offer any input, comments, etc that may be helpful to the Directors in serving as your Representative.

This is you Association..... its level of activity, involvement in problem areas, its success or failure, depend on how much work you want to put out. I have heard a lot of propositions and a lot of complaints from members and non members regarding what the Association should do, or not do. But the number of people who step forward to actually help with the work is sometimes very limited. So come prepared to offer your ideas and shoulders.

RECONSIDERATION of the Report and Order, Docket 20073, related to linking of repeaters has been requested by WA1HOZ through a recent filing. WA1HOZ objects to the requirement for filing system network diagrams and to the lack of provision for temporary tandem operation of a repeater operated portable. tnx ARRL Directors Letter.

TAPED LOGGING ..... Now that the automatic control provision has been approved, there are several repeater groups that are considering pooling their resources and setting up a central logging center to tape all transmissions from all repeaters in a given metropolitan area. With the availability of surplus 8 track taping equipment, geared to a very low speed, several repeaters may be recorded at the same time, thereby reducing the overall taping effort for everyone. If you have any ideas on this, or any related taping systems, please send them to Watson Gabriel, WB4EXW, 5936 Timberwood Tr., Kernersville, NC 27284. Watson will compile the systems and make them available to all member repeaters.

LINKING..... Several repeater groups have started preparing plans to link repeaters since the regulations have now authorized this. If you are considering such, please contact Don Harris, W4BUZ, Rt 11, Box 160, Greensboro, NC 27410. Don is working up a recommendation for the CVRA in this area and will need your input.

F C C R U L E S

Don Harris, W4BUZ
CVRA FCC Liason Representative

Repeater Linking

Effective July 11, 1975, the linking of more than two repeater stations will be legal when done in accordance with the terms set forth in Docket 20073, dated May 28, and in accordance with applicable parts of Part 97 of the Commissions Rules.

Each repeater station participating in a linking arrangement will be required to submit a system network diagram to the Commission showing all related stations in the system. This diagram shall include auxiliary link stations involved in the linking system. FCC makes it clear that such interconnection does not relieve any licensee, trustee, or control operators of the proper responsibility for the proper operation of their station. This means shut down upon any deviation from the rules followed by the licensee taking action to prevent re-occurrence. All licensees and control operators should read 97.88 to assure that you understand your responsibility.

FCC reminds licensees that this change does not permit crossbanding of repeaters. Such operation is being considered in Docket 20113.

Linking of repeaters has many problems whether duplexing or a split site is employed. The Associationis taking a look at best ways and a plan at the request of the President.

Automatic Control of Repeaters

The FCC has amended it's rules, effective July 28, to permit operation of amateur repeater stations without a control operator being on duty at an authorized control point, under certain circumstances. The full details appear in Docket 20112, and can be read in August QST.

After the effective date, automatic control of repeaters may be begun without prior approval from the Commission, provided that compliance with the new rules is maintained. Automatic control is defined as the use of devices and procedures for control so that a control operator does not have to be present at the control point at all times. This applies to auxiliary link stations when used with a repeater, only.

Basically, there are two modes or methods of operating without a control operator being on duty at a control point. In the first case, all communications transmitted by the station (repeater) must be recorded in real time so that it can be reviewed within 72 hours. (Editor's note: Recent clarification of this by the FCC indicates that the tapes do not have to be reviewed as a normal matter of course, but only if there is a suspected need to do so, or if requested by the Commission. They must be retained for 30 days.) Tapes are to be kept for 30 days and made available for the Commission upon request.

In the second case, real time monitoring or recording is not required, however, the repeater must be operated as a closed repeater used only by those licensees specifically authorized to access the machine. It appears that private line operation would be best in these cases in view of the fact that tone burst to enable the COR doesn't prevent unauthorized stations from riding in once the COR is enabled.

The latter closed method will permit repeaters to be on at times when recording is not practical and no control operator is available. Many repeater users dislike closed repeaters as do many repeater owners, however, this change in rules would permit some usefulness to a community from a repeater at times when it would otherwise be closed down.

The Commission, in making these rules changes, did so with much riding on the amateur's ability to be self-regulating and the licensees ability to control those using the repeater. Should a complaint be made to FCC about a violation, termination of automatic control will be required until showing is made that problems have been corrected. Where recording transmissions are concerned, the licensee of the repeater will have to really watch for deviations from the rules and take action to see that they do not re-occur, or he may get a letter from FCC saying cease and desist automatic control and show cause. Where closed operations exist, the licensee will really have to be careful who he lets loose on the machine or he, too, may get a letter to stop such operations and show cause. I have heard two cases in the past two days where such letters would be deserved, if the licensee didn't take action to prevent re-occurrence. Our ability to maintain this privilege will depend upon both repeater licensees, trustees, control operators and users to get across how important it is that good amateur practice be used at all times. Get your copy of the automatic control docket 20112 and be certain that you understand all the provisions before you undertake automatic control.

Restructuring Comments

The Association has filed comments on the restructuring proposals covered in Docket 20282. The following points were made:

1. Pointed out the concern for not allowing Generals and Technicians the privilege of serving as repeater trustees and control stations.

2. Opposed the provision that conditional licensees must renew their licenses before an examiner.

3. Opposed the two track system as proposed in the docket.

Supporting comments were included to further expound on each of the above.

When To Violate The Rules

As your FCC Liason Representative, the answer to the above title is a flat NEVER..... The article which appeared in a recent Association publication originating from "Hotline", indicated certain methods as OK violations in locating one who is suspected to be a CB operator who has found his way into a repeater. As I interpret the rules, an amateur who takes up an identifier such as Green Mouse, Pine Tree, etc., and tries to lure the violator into telling his identity is in severe violation of the Communications Act of 1934, is subject to up to 10,000 dollars fine and/or two years in the pen. Repeater Control Operators who leave their machines on the air for unlicensed or unidentified stations to use are willfully and knowingly permitting a deviation from the rules to go on and are liable. In order to prevent yourself from possibly being faced with the effective rules existing, if you are a repeater owner or amateur operator thinking you are helping, best you don't operate on a premise of somebody who thinks the Commission will look the other way. They are charged with the responsibility of enforcing the rules as written and don't forget that.

REPORT FROM THE BAY DISTRICT

Director: WA4MMP Bill Shaw 2216 Dunbarton Drive Chesapeake, Va. 23325
Vice Dir: WA4JZX Joe Stevens 704 W. Main St. Elizabeth City, NC 27909

(HAMPTON, VA) ..... WR4ALH, 13/73, is in the final "proof and debug" stages. Burn in is currently taking place in the garage of WB8IIM/4. The hold up has been in getting their homebrew duplexer completed and tuned up. Full operation from atop the Chamberlin Hotel overlooking Hampton Roads should begin in early September. tnx WA4MMP

(PORTSMOUTH, VA) ..... The 25/85 repeater is essentially complete with a firm site just finalized on the old WYAH, Channel 27, TV tower on the Portsmouth waterfront. Plans call for this first generation Motorola repeater to use two antennas. Receive will be at 400 feet and the transmitting antenna at 300 ft. A secondary receive antenna at 100 ft on the same tower is planned to eliminate spurious key ups when the band is open. The license application will be off to the FCC in early August and equipment installation should be complete by mid September. This will be an open repeater with autopatch. Tentative plans also include possible linking to WR4ADN(46/06) in Elizabeth City and WR4ACN(19/79) in Chesapeake/Norfolk. Owner, operator, and Trustee is Tom Lusson, WA4ILH. tnx WA4MMP

FROM THE DIRECTOR, WA4MMP..... I have received no further inquiries from any other individual or club desiring to establish any other repeaters in the Bay District. It is a true statement that as of present, we do not "need" any more machines to handle the amateur population in this area. Currently several of our repeaters are hardly ever used..... to that end I will not discourage anyone desiring to build one, but I will be quick to point out that if they intend on providing an open machine, as all of ours are now, it probably will suffer from a severe lack of activity. Editor's note: This same comment has been received from a number of active two meter amateurs from all over the CVRA District. Two repeater clubs have actually asked for ideas on how to increase activity.

(CHESAPEAKE/NORFOLK, VA) ..... WR4ACN, 19/79, has replaced its old Motorola decks and "Ma Bell" logic system with an all new commercial grade GE MASTR repeater controlled by TTL logic. The new system is entirely solid state (with the exception of the MASTR driver and final) and features a 30 function decoder, for future growth, and full time Autopatch. The Autopatch is accessed by *79, and disconnected by "#". The system delivers 60 watts to the base of a 6dB commercial grade GAM at 160'HAAT, 180' MSL. ERP is a maximum of 240 watts. All necessary equipment for switching over to emergency power has been ordered and this feature (automatic switchover to emergency power while maintaining all repeater functions including autopatch) is expected to be available by mid September, 1975. tnx WA4MMP

(ELIZABETH CITY, NC/CHESAPEAKE, VA) ..... Plans are currently in progress to link WR4ADN(46/06) and WR4ACN(19/79). The two repeaters are approximately 50 miles apart with just overlapping coverage for 10 watt mobiles. Link will be via 70 cm UHF and will be available to users in both cities via touchtone function. tnx WA4MMP & WA4JZX

(ELIZABETH CITY, NC) ... WR4ADN, 46/06, is now equipped to give you the latest weather news by accessing *23. This will connect you with the National Weather Bureau Station on 160.55 mHz where you can listen and get the latest news. This arrangement was approved by the Commission through a request from WA4JZX since the 160.55 station is to far away from Elizabeth City to be heard with any regularity. tnx WA4JZX

REPORT FROM THE NORTHERN DISTRICT

Director: K4ARO Carter Cogle 1667 Varina Ave. Petersburg, Va. 23803
Vice Dir: K4PQD Tom Gimbert Rt 1, Box 18 Rixeyville, Va. 22737

(RICHMOND, VA) .... WR4ACW, 28/88, has a new autopatch and several other "on request" functions such as time and weather from WGU-20, which broadcasts down around 100 kHz. The autopatch is restricted to full members and requires an 8 digit access code. Control should be on full radio remote soon. The machine is now a single site operation at Richmond's Channel 23 ETV Station. tnx K4ARO

(RICHMOND, VA) ..... There is a growing interest in 220 mHz simplex activity in this area. Expect to hear two or three stations on the air very soon. Activity on 6 meter FM continues to flourish with approximately 20 stations in the Richmond-Petersburg area active on 52.525 and 52.64 Simplex. Many are working DX as the Sporatic E conditions have been great this Spring and early Summer. tnx K4ARO

(PETERSBURG, VA) ..... The Crater ARA is interested in establishing a two meter repeater to fill the gap on I-85/95 south of Petersburg. Frequencies have not yet been selected. tnx K4ARO

(RICHMOND, VA) ..... WR4ACW, 28/88, sponsored by the Richmond Amateur Telecommunications Society, RATS, has requested to be able to use 43/03 as an "alternate" frequency when conditions necessitate. tnx WA4WTX

(LEXINGTON, VA) .... WR4ABU, 52.01/53.01, should be operational within the next 30-45 days reports Tom Gimbert, K4PQD. The GE MASTR II will feed two unity gain antennas, vertically separated, mounted on the side of the tower. WB4NYE, Carl, is putting the repeater together. Several months of experimenttation is anticipated before the machine will be in its final configuration. The site will be on Cole Mtn at the WR4ABU, 01/61, operation.

(NEW MARKET, VA) ..... The proposed machine for 93/33 is finally taking shape. It looks like the Spring of 76 before it will be on the air however. This will be linked with the 01/61 repeater at Cole Mtn via 450. tnx K4PQD

(LEXINGTON, VA) .... The Central Virginia Traffic Net continues to meet each evening at 2000 on the 01/61 repeater, WR4ABU. Net Manager is John, WB4KIT. tnx K4PQD.

(CULPEPPER, VA) ..... Rumors of a group getting interested in a repeater here. Anybody got any details on this?

(STAUNTON, VA) ..... Welcome to the CVRA, WR4ACL, 37/97. Roy Silling, W4WRN, owns and operates this machine which operates from a site 8 miles SW of Staunton at the junction of highways 252 and 701. Equipment is GE Progress Line that feeds two 6dB antennas separated 50 ft vertically. Good mobile coverage is provided in the counties of Augusta, Rockingham and Nelson. The repeater is usually operated between the hours of 1600 and 2300 local time. This is an open, carrier accessed machine with 5 kHz deviation. It is under direct control. Representatives to the CVRA are Roy Silling, W4WRN, and A. L. Barnett, WB4PFI.

LICENSE TAGS .... If you want a 1976 North Carolina license plate with your call on it, please arrange to get the proper form from the Dept of Motor Vehicles and return it to them by November. If you currently have a plate, you will be receiving a form in the mail. Be sure to get your Bi-Centenial plate..... Through the efforts of a number of amateurs, Herb Lacy, K4FBG, being one of the leaders, the fee was lowered from $ 10 to $ 4..... so let's show our appreciation for this..... display your call in 76.

TWO METERS PERMITS RESCUE

On June 21, 1975, a call for help went out over WR4AGS, 22/82, at Roaring Gap, NC. Fred Brown, WB4IFO, was among a group mountain climbing at Hanging Rock State Park. A steel pin supporting Fred came loose causing him to fall over 20 feet onto a ledge, up about 150 feet from the ground. Fortunately, he had a two meter walkie talkie in his pocket. The other two members of the group descended down to where Fred lay unconscious, and put out a call for help through the Roaring Gap repeater. WB4VNZ and WB4EXW responded and contacted the Highway Patrol who in turn notified the Sauratown Mountain Rescue Squad who successfully brought WB4IFO down and to the Baptist Hospital in Winston-Salem. WB4IFO sufferred a fractured skull and broken hand from the fall. Fred's father, WA4CBB, stated that "probably two meters can be attributed with saving my son's life."

The CVRA would like to commend WB4VNZ and WB4EXW for their efficient handling of the emergency, and for the owners and operators of WR4AGS Repeater for providing the fine machine that so faithfully serves the mountain area of North Carolina.

"HOTLINE" ..... no more "late breaking news"

With issue No. 34 dated July 11, 1975, "Hotline", the fine newsletter published by Wayne Green, W2NSD/1 ("73 Magazine") came to the end of its career.

I for one am going to really miss this publication..... I got where I really looked for the fool thing in my mail box. For some reason, it really became a popular publication all over this area of the country. Not that it really contained all that much extra news, but it was well organized and contained the usual "controversial comments" from Wayne. All of the Repeater Councils can truthfully say that it did more to exchange views and news between them than any other publication.

This newsletter, "The Repeater Journal", is going to have to get back to really digging for the news now.

Plans are being made to increase "73 Magazine" subscriptions to persons who subscribed to "Hotline" in proportion to the unfilled "Hotline" subscriptions due.

This Editor would like to thank W2NSD for his efforts.

T-MARC - THE MID ATLANTIC REPEATER COUNCIL

The Mid Atlantic Repeater Council, T-MARC, our sister repeater council to the north of us - serving Northern Virginia, DC, Maryland, and Deleware - has undergone a change in leadership recently. George Miller, K4EJY, one of the mainstays of the Council, and more recently President, sufferred a heart attack several months ago and has had to resign as President, and drop from the active rolls of the Council for a while.

T-MARC will sadly miss the leadership and enthusiasm displayed by George, as he really seemed to be the man who kept the Council moving.

At a June 1, meeting, Jerry Horwitz, W3EZT, was elected the new T-MARC Coordinator (President). Jerry is a real repeater builder and operator. He speaks from first hand experience in repeater problems and operations.

NET REGISTER (LOCAL TIMES SHOWN)

TWO METERS

FAYETTEVILLE, NC	WR4ADK	31/91	CAPE FEAR ARS NET	DAILY	1930
LEXINGTON, VA	WR4ABU	01/61	CENTRAL VIRGINIA TRAFFIC NET	DAILY	2000
SALISBURY, NC	WR4AAA	13/73	CENTRAL NORTH CAROLINA TFC NET	DAILY	2200
RALEIGH, NC	WR4ACF	04/64	RARS NET	MTTHF	2000
RICHMOND, VA	WR4ACW	28/88	AMATEUR TRAFFIC & TROUBLE NET	MTWTH	2030
BURLINGTON, NC	WR4AIF	07/67	ALAMANCE AREC NET	MWF	2100
CATAWBA CO, NC	SIMPLEX	146.82	CATAWBA COUNTY RACES NET	MON	1900
NORFOLK, VA	SIMPLEX	145.80	HAMPTON ROADS EMERGENCY NET<AM>	MON	2000
CHARLOTTE, NC	WR4AEU	34/94	MECKLENBURG ARS NET	MON	2030
LYNCHBURG, VA	WR4ADY	34/94	LYNCHBURG TWO METER NET	TUE	1900
ASHEVILLE, NC	WR4AKR	16/76	WESTERN NORTH CAROLINA TFC NET	TUE	2030
NORFOLK, VA	SIMPLEX	145.025	TIDEWATER SSB NET(2M) <SSB>	TUE	2100
HAMPTON, VA	WR4AFT	34/94	HAMPTON ROADS EMERGENCY NET	WED	2000
LENOIR, NC	WR4ACM	25/85	WESTERN PIEDMONT EMERGENCY NET	WED	2100
WINSTON-SALEM, NC	WR4ACA	04/64	FORSYTH CO AREC/RACES NET	WED	2100
GRIFTON, NC	WR4ABP	16/76	ENC EMERGENCY NET	THU	2000
GREENSBORO, NC	WR4ANP	72/12	GUILFORD COUNTY EMERGENCY NET	THU	2100

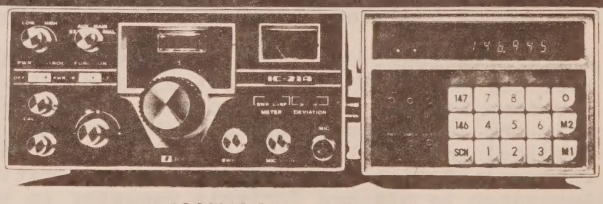
SIX METERS

RICHMOND, VA	50.250	CENTRAL VIRGINIA NET <AM>	DAILY	1900
LEXINGTON, NC	50.120	NORTH CAROLINA 6 MTR ASSN (SSB)	SUN	0900
ATLANTA, GA	50.110	INTERSTATE NET (SSB)	SUN	2100
CHARLOTTE, NC	50.400	CHARLOTTE HORNET NET (AM)	SUN	2100
NORFOLK, VA	50.150	TIDEWATER SSB NET(SSB)	TUE	2000
CHARLOTTE, NC	50.110	DIXIE NET (SSB)	WED	2100
GLENDALE SPRINGS, NC	50.120	NORTH CAROLINA SIX MTR NET (SSB)	THU	2100

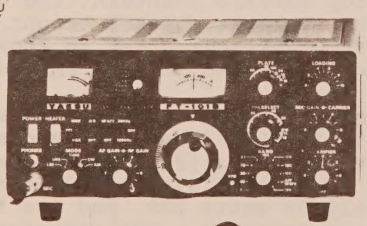
SIGMASIZER 200R

YAESU

FT-101-B
160-10 Meter
Tranceiver



ICOM IC-21A and the DV-21



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MEMBERSHIP STATUS REPORT
W4IZI & WB4LWX

District	Mtn	Nor	Bay	Wes	Pmt	Eas	Cen	Sou	Cos	Other	Total
Repeaters	4	4	7	7	10	8	7	5	8	-	60
Rptr Reps	8	5	14	14	18	15	11	10	15	0	110
Associates	23	17	20	27	154	100	44	18	32	17	452
Totals	31	22	34	41	172	115	55	28	47	17	562
Mbrs/Rptr	7.8	5.5	4.9	5.9	17.2	14.4	7.9	5.6	5.9	-	9.4

During the past year we have added 229 new Associate Members and have had renewals from 166. The members per repeater ratio has climbed slightly during the past six months, although it should be much higher. We should be able to average 15 members/repeater without any trouble at all.....

Look at your District -- what can you do to help increase our membership?

MORE ABOUT REPEATERS ON THE TENN-NC BORDER
Bob May, WA4DBG

Here is a run down on some of the repeaters in East Tennessee about which CVRA members traveling in this area will find interesting:

Bristol, Va/Tenn ..... There is a fine medium height repeater here on 28/88. Coverage appears to be about 30 miles radius, with a few dead spots to the west. The repeater, WR4AFZ, is owned by the Bristol Amateur Radio Club.

Kingsport, Tenn. ..... The Kingsport Amateur Radio Club owns and operates repeater WR4AGE which is located atop Holston Valley Community Hospital in downtown Kingsport. The repeater is completely solid state and has required only one service call since installation. As the repeater is hooked to hospital power, it is capable of staying on the air when commercial power is interrupted since the hospital has automatic switchover to emergency generators. Autopatch is planned for this repeater in the future. Repeater frequency is 22/82.

Johnson City, Tenn. .... From atop Buffalo Mountain, the Johnson City Repeater Association operates WR4AIP. The repeater antenna height is about 3200 feet and the repeater range extends from Chilhowie, Va. to Knoxville, Tenn. The frequency is 19/79. The antenna is located on WQUT FM radio tower.

Greeneville, Tenn. ....This repeater is located atop Viking Mountain at an elevation of 4800 feet. Its call is WR4AHP and the frequency is 10/70. When this repeater first went on with only 6 watts of power, rematkable coverage was obtained from Abington, Va. to Asheville, NC, and to Knoxville, Yenn. Now the repeater has approximately 38 watts ERP, and its full range will not be known until more stations start using it. The repeater is completely homebrew, except for the identifier, and completely solid state. The persons involved in the construction of the repeater and its operation are Charlie, W4KKP, Lee, W4ANB, and Vern, WB4CXL, who is now in Orangeburg, SC.

Blountville, Tenn. ..... A new repeater is in the planning stages for Blountville, which is located in the center of the tri-cities area. This repeater will be owned and operated by Jerry, W4VZF, and will operate in the 147 mHz area. Autopatch facilities will be available.

DISTRIBUTION OF TWO METER REPEATERS

	NORTH CAROLINA	SOUTH CAROLINA	VIRGINIA
01/61		GREENVILLE	LEXINGTON
04/64	ASHEVILLE, RALEIGH WINSTON-SALEM		
07/67	BURLINGTON, FOREST CITY LAURINBURG		BARREN SPRINGS
10/70	GREENVILLE(TN)	LANCASTER	DANVILLE
13/73	SALISBURY	NC. AUGUSTA	HAMPTON, ROANOKE
16/76	GRIFTON, ASHEVILLE GREENSBORO, KINGSPORT(TN)	CHARLESTON	LYNCHBURG
19/79	HIGH PT, JOHNSON CITY(TN)	ROYSTON(GA)	CHESAPEAKE, FAIRFAX
22/82	ASHEVLE, CHARLOTTE, DURHAM WILMINGTON, ROARING GAP	GREENVILLE	WINCHESTER
25/85	HICKORY, REIDSVILLE SEVEN SPRINGS		PORTSMOUTH
28/88	RALEIGH, SHELBY BRISTOL(TN)	COLUMBIA, SAVANNAH(GA)	CHARLOTTESVILLE RICHMOND, ROANOKE
31/91	FAYETTEVILLE, LEXINGTON MURFREESBORO	BEAUFORT	TYSONS CORNER
34/94	AURORA, CHARLOTTE, DURHAM BEULAVILLE, MANTEO	CHARLESTON, COLUMBIA GREENVILLE, AUGUSTA(GA)	HAMPTON, LYNCHBURG ROANOKE, RICHMOND
37/97	MT AIRY	ANDERSON, FLORENCE	ROANOKE(38/98), BULL RUN STAUNTON, VIRGINIA BEACH
40/00	HIGH POINT, JACKSONVILLE	PICKENS	SUFFOLK
43/03	SMITHFIELD	ROCK HILL	RICHMOND
46/06	CHARLOTTE, ELIZABETH CITY		
69/09	GREENVILLE		GALAX
72/12	GREENSBORO		
75/15	DURHAM, MORGANTON		ALEXANDRIA
78/18	BURLINGTON, CHARLOTTE		
81/21	LAKE TOXAWAY		
84/24	FRANKLIN		WOODBRIDGE
87/27	WINSTON-SALEM	SUMTER	
90/30	FAIRVIEW(24/90)	AUGUSTA(GA)	
93/33	LENOIR		NEW MARKET
96/36		COLUMBIA	
99/39			

North Carolina

ASHEVILLE	WR4ALC	146.04	146.64	C
ASHEVILLE	WR4AKR	146.16	146.76	C
ASHEVILLE	WR4AGF	146.22	146.82	C
AURORA	WR4ABQ	146.34	146.94	C
BEULAVILLE	WR4ADS	146.34	146.94	C
BURLINGTON	WR4AIF	146.07	146.67	C
BURLINGTON	WR4AKY	147.78	147.18	P
CHARLOTTE	WR4ABT	146.22	146.82	C O
CHARLOTTE	WR4AEU	146.34	146.94	CA
CHARLOTTE	WR4ALO	146.46	147.06	C
CHARLOTTE	WR4ABK	147.78	147.18	C
DURHAM	WR4AGC	146.22	146.82	CA
DURHAM	WR4AJY	146.34	146.94	AT
DURHAM	WR4AJV	147.75	147.15	C
ELIZABETH CITY	WR4ADN	146.46	147.06	CAT
FAIRVIEW	WR4AJX	147.24	147.90	
FAYETTEVILLE	WR4ANN	146.31	146.91	C
FOREST CITY	WR4AHA	146.07	146.67	C
FRANKLIN	WR4ALD	147.84	147.24	C U
GREENSBORO	WR4	146.16	146.76	C O
GREENSBORO	WR4ANP	147.72	147.12	C
GREENVILLE	WR4AMB	147.69	147.09	CA
GRIFTON	WR4ABP	146.16	146.76	C
HICKORY	WR4	146.25	146.85	U
HIGH POINT	WR4AFV	146.19	146.79	C
HIGH POINT	WR4ADT	146.40	147.00	A
JACKSONVILLE	WR4AJG	146.40	147.00	C U
LAKE TOXAWAY	WR4AGH	147.81	147.21	P
LAURINBURG	WR4AIB	146.07	146.67	C
LENOIR	WR4ACM	147.93	147.33	C U
LEXINGTON	WR4ABX	146.31	146.91	CA
MANTEO	WR4AKB	146.34	146.94	C
MORGANTON	WR4	147.75	147.15	P
MT. AIRY	WR4ACJ	146.37	146.97	C
MURFREESBORO	WR4AFB	146.31	146.91	CA
RALEIGH	WR4ACF	146.04	146.64	C
RALEIGH	K4ITL	146.28	146.88	CA
REIDSVILLE	WR4ADE	146.25	146.85	C
ROARING GAP	WR4AGS	146.22	146.82	C
SALISBURY	WR4AAA	146.13	146.73	CA
SEVEN SPRINGS	WR4AEF	146.25	146.85	C
SHELBY	WR4ABF	146.28	146.88	C
SMITHFIELD	WR4ALY	146.43	147.03	C U
WILMINGTON	WR4AHL	146.22	146.82	C
WINSTON-SALEM	WR4ACA	146.04	146.64	CA
WINSTON-SALEM	WR4	147.87	147.27	P

ASHEVILLE	WR4ALC	52.01	53.99	C U
DURHAM	WR4	52.15	53.15	U
HICKORY	WR4	52.78	52.525	P
SALISB/MOCKSVLE	WR4	52.76	52.525	U

ASHEVILLE	WR4AKR	222.34	223.94	C
DURHAM	WR4AGC	222.34	223.94	C
DURHAM	WR4	223.22	224.82	U
RALEIGH	WR4	223.34	224.94	U

ASHEVILLE	WR4AKR	449.90	444.90	C U
CHARLOTTE	WR4AEI	450 PRIVATE		
DURHAM	WR4AGC	449.10	444.10	CAT
HIGH POINT	WR4ADT	447.90	442.90	
WINSTON-SALEM	WR4	448.00	443.00	U

South Carolina

ANDERSON	WR4AIO	146.37	146.97	C
BEAUFORT	WR4	146.31	146.91	U
CHARLESTON	WR4	146.16	146.76	P
CHARLESTON	WR4AFX	146.34	146.94	C T
COLUMBIA	WR4	147.96	147.36	P
COLUMBIA	WR4ACD	146.34	146.94	CAT
COLUMBIA	WR4ABA	146.28	146.88	C
FLORENCE	WR4AGM	146.37	146.97	C
GREENVILLE	WR4ADG	146.01	146.61	C
GREENVILLE	WR4ABG	146.34	146.94	C T
GREENVILLE	WR4AHJ	146.22	146.82	A
LANCASTER	WR4ABM	146.10	146.70	
NORTH AUGUSTA	WR4ABB	146.13	146.73	C
ORANGEBURG	WR4			P
PICKENS	WR4ADP	146.40	147.00	C
ROCK HILL	WR4AJO	146.43	147.03	C
SUMTER	WR4	147.87	147.27	P

C CVRA MEMBER
A AUTOPATCH
T TONE ACCESS
* ALTERNATE FREQUENCY
U UNDER CONSTRUCTION
P PROPOSED
O OFF AIR TEMPORARILY

CHARLESTON	WR4AFX	449.10	444.10	C U

Virginia

ALEXANDRIA	WR4	147.75	147.15	U
BARREN SPRINGS	WR4AFQ	146.07	146.67	
BULL RUN	WR4ADZ	146.37	146.97	T
CHARLOTTESVILLE	WR4ADV	146.28	146.88	
CHESAPKE/NORFLK	WR4ACN	146.19	146.79	CA
DANVILLE	WR4AHG	146.10	146.70	
FAIRFAX	WR4AAD	146.19	146.79	
GALAX	WR4AHR	147.69	147.09	C
HAMPTON	WR4ALH	146.13	146.73	U
HAMPTON	WR4AFT	146.34	146.94	C T
LEXINGTON	WR4ABU	146.01	146.61	C
LYNCHBURG	WR4ADY	146.34	146.94	C
LYNCHBURG	WR4AEN	146.16	146.76	
NEW MARKET	WR4	147.93	147.33	P
PETERSBURG	WR4			P
PORTSMOUTH	WR4	146.25	146.85	U
RICHMOND	WR4ADI	146.34	146.94	T
RICHMOND	WR4ACW	146.28	146.88	CAT
RICHMOND *	WR4ACW	146.43	147.03	C P
ROANOKE	WR4AFE	146.28	146.88	C
ROANOKE	WR4AFY	146.38	146.98	
ROANOKE	WR4AHT	146.34	146.94	
ROANOKE	WR4AMQ	146.13	146.73	C
STAUNTON	WR4ACL	146.37	146.97	C
SUFFOLK	WR4AKS	146.40	147.00	C
TYSON'S CORNER	WR4ABR	146.31	146.91	
VIRGINIA BEACH	WR4AAC	146.37	146.97	CA
WINCHESTER	WR4AGT	146.22	146.82	
WOODBRIDGE	WR4AII	147.84	147.24	

LEXINGTON	WR4ABU	52.02	53.02	C P

TYSON'S CORNER	WR4AEY	222.34	223.94	
WOODBRIDGE	WR4AIJ	223.22	224.82	

ROANOKE	WR4AHT	447.75	443.75	U

146 MHZ BAND

GENERAL

146.00 - 146.46 Repeater Inputs
146.49 - 146.58 Simplex
146.61 - 147.06 Repeater Outputs
147.09 - 147.39 Repeater Outputs
147.42 - 147.66 Simplex
147.69 - 147.99 Repeater Inputs

All channel spacing is 30 kHz

REPEATER CHANNELS (27)

Input	Output	Input	Output
146.01	146.61	147.69	147.09
146.04	146.64	147.72	147.12
146.07	146.67	147.75	147.15
146.10	146.70	147.78	147.18
146.13	146.73	147.81	147.21
146.16	146.76	147.84	147.24
146.19	146.79	147.87	147.27
146.22	146.82	147.90	147.30
146.25	146.85	147.93	147.33
146.28	146.88	147.96	147.36
146.31	146.91	147.99	147.39
146.34	146.94		
146.37	146.97		
146.40	147.00		
146.43	147.03		
146.46	147.06		

SIMPLEX CHANNELS (13)

146.49 DX	147.42	147.57
146.52 NCF	147.45	147.60
146.55	147.48	147.63
146.58	147.51	147.66
	147.54	

SIMPLEX CHANNELS IN 145 MHZ REGION

Here are 28 channels available for simplex activity which just about all rigs will cover. Avoid operating between 145.85 - 145.975 as this portion is being used for satellite Communications.

145.02	145.23	145.44	145.65
145.05	145.26	145.47	145.68
145.08	145.29	145.50	145.71
145.11	145.32	145.53	145.74
145.14	145.35	145.56	145.77
145.17	145.38	145.59	145.80
145.20	145.41	145.62	145.83

CLUB MEETING CALENDAR

NORTH CAROLINA

ASHEVILLE	BUNCOMBE CO ARC 1ST THU 1930 COUNTY COURT HOUSE
ASHEVILLE	WNC VHF GROUP 2ND MON 1900 DINNER MTG @ GRACE REST MERRIMON ST
CARY	CARY ARC 4TH THU 1930 WHITE PLAINS METH CH, K4ITL RPT(28/88)
CHARLOTTE	MECKLENBURG ARS LAST TUE 1930 RED CROSS BLDG ON PARK RD, W4BFB/WR4AEU(34/94)
CHARLOTTE	CHARLOTTE RC THU 1900,CLUB IN BLDG @ WSOC-TV ON N TRYON ST, BUS MTG 1ST THU - W4CQ/WR4ALC(46/06)
CHARLOTTE	FRIDAY LUNCH GROUP FRI 1200 @ SHONEYS ON INDEPENDENCE BLVD
DURHAM	DURHAM FM ASSN 2ND TUE 1800 BONANZA STEAK HOUSE ROXBORO RD DINNER FOLLOWED BY PROGRAM, WR4AGC(22/82)
FAYETTEVILLE	CAPE FEAR ARS 3RD MON 1900 METHODIST COLLEGE WR4ADK(31/91)
GREENSBORO	GREENSBORO RC FRI 1930 CLUB HOUSE NEAR FRIENDSHIP AIRPORT BUS MTG 1ST FRI W4GG
GREENSBORO	H.A.M.L.E.T. 3RD FRI 1830 BONANZA STEAK HOUSE I40 @ JAMESTOWN RD
GREENSBORO	L.I.A.R.S. 2 + 4TH THU 1830 WESTERN SIZZLER, WEST MARKET ST.
JACKSONVILLE	ONSLOW ARC 2ND SAT 2200 HOWARD JOHNSONS RESTAURANT
LEXINGTON	HEALING SPRINGS MTN VHF SOC LAST MON 1930 BURLINGTON HOUSE FURNITURE CO PERSONNEL OFFICE W4PAR/WR4ABX(31/91)
RALEIGH	RALEIGH ARS 1ST WED 1930 CO RM NC STATE ADMIN BLDG W4DW,WR4ACF(04/64)
SALISBURY	ROWAN ARS 2+4TH MON 2000 SALISBURY CITY HALL W4EXU,WR4AAA(13/73)
WINSTON-SALEM	FORSYTH ARS 2ND FRI 1930 NAVAL RESERVE TNG CTR

SOUTH CAROLINA

CHARLESTON	HOLIDAY VHF SOC 2ND WED 1930 HOLIDAY INN RIVERVIEW WR4AFX(34/94)
COLUMBIA	CAROLINA RPTR SOC 1ST MON 1930 PROVIDENCE PRES CH WR4ACD(34/94)
GREER	GREER ARC 1ST MON 1930 MTG LOC ANNOUNCED MONTHLY WR4ABG(34/94)

VIRGINIA

LYNCHBURG	LYNCHBURG ARC 2ND TUE 2000 BEULAH BAPTIST CH K4HEX
NEWPORT NEWS	SPARC 1+3RD WED 1930 VEPCO BLDG HAMPTON WR4ALH(13/73)
NORFOLK	HAMPTON RDS RAD ASSN NEXT MTG SEPT LOC TBA WA4MMP FOR DETAILS WR4ACN(19/79)
RICHMOND	RICHMOND AMATEUR TELECOMMUNICATIONS SOC(RATS) 1ST & 3RD FRI 1930 THE STONE HOUSE FORREST HILL PARK 1ST MTG BUS MTG WR4ACW(28/88)
VIRGINIA BEACH	VA BCH ARC 1ST TUE 1930 PLAZA FIRE STN WR4AAC(37/97)

REPORT FROM THE CENTRAL DISTRICT

Director: Bill Bridges, K4WHQ 904 East Main St. Shelby, NC 28150
Vice Dir: Ken Dresser, WB4NDB Rt 11 Box 179T Charlotte, NC 28213

(CHARLOTTE, NC) .... The Mecklenburg ARS, club station W4BFB and sponsor of WR4AEU, 34/94, scored 8th in the nation in the multi operator category in the 1975 VHF Sweepstakes held in January 1975. Operating from Doughton Park, on the Blue Ridge Parkway in North Carolina, the 18,444 points (318 contacts) far exceeded any other station in the 4th or 5th Call areas. This established a new contest record for the Roanoke Division.

Later, participating in the June 1975 VHF Contest, the Mecklenburg club scored over 28,000 points ..... apparently setting another record for the June contest. This time, operations were from Ferguson Mountain, located about 20 miles SW of Charlotte in South Carolina. (tnx K4GHR)

(CHARLOTTE, NC) ..... WR4ABK, 78/18, now in operation from atop the Holiday Inn near Carowinds. The VHF Engineering Repeater feeds through a Phelps-Dodge duplexer into a Stationmaster on top of the 12 story motel. Power out is around 20 watts. A surprisingly good coverage area is provided for mobiles. The machine is owned and operated by WA4IPQ and WB4YFC. (tnx WA4IPQ)

(ROCK HILL, SC) ..... WR4AJO, 43/03, is now in continuous operation.

(CHARLOTTE, NC) .... WR4ALO, 46/06, sponsored by the Charlotte Radio Club, now has the receiver mounted on the tower close to the receiving antenna. From this point 600' above the surrounding terrain, it is hearing much better than it has in the past.

REPORT FROM THE WESTERN DISTRICT

Director: WB4ROI Henry Roberts 131 Wilshire Dr. Greenville, SC 29609
Vice Dir: WA4NUO Ralph Roberts Rt 1 Box 284 Alexander, NC 28701

(GREENVILLE, SC) .... WR4AHJ, 22/82, is owned and operated by Wade Holland, W4AZT, Hillandale Circle, Paris Mtn, Greenville, SC. The machine feeds about 150 watts through a duplexer into a Stationmaster at around 70 feet. The machine is on the southern slope of the mountain and provides good coverage to the south, east and west, but is blocked to the north. tnx WB4ROI

(ANDERSON, SC) .... WR4AIO, 37/97, has been on the air for the past month.

(GREENVILLE, SC) ..... WR4ADG, 01/61, has been off the air recently but will be back on the air in the very near future. This machine operates from the WFBC-TV transmitter site.

(MT. PISGAH, NC & KINGSPORT, TN) ..... The 16/76 situation continues to be the worse problem that exits in the CVRA area. Two good repeaters continue to pound away at one another. Understand that the FCC has already gotten active..... that's a real shame.

(BOONE, NC) ..... A group here is considering a two meter repeater to be located on Rich Mountain at 5000' MSL and 2700' HAAT. A building and tower are already on the site. tnx WB4MFF

PLAN TO HUNT A TRANSMITTER ?

The incident which happened on the Salisbury Repeater, described on page 4, regarding the unidentified signal on the repeater input frequency, was a real educational experience for the search team involved. This has caused me to put together some thoughts and comments which may be useful to those who have participated in a club organized transmitter hunt, but maybe never in the "real thing".

ORGANIZATION:

One of the major differences in the "fun type of hunt" compared to the "real thing" is that in one case you are working as individual teams, and in the other case you are working as one team. This calls for one person to be designated to fully coordinate all of the various activities which must take place. The speed with which the hunt must progress and the degree of organization and control required depends on the type of signal being searched for..... is it a continuous signal, or is it intermittant ? An intermittant signal will take longer to "smoke out", and require more discipline and control.

The Coordinator should establish himself in a fixed location with a good supply of maps covering the area to be searched. He should have two rigs in position, one to monitor the frequency on which the "hunted transmitter" is on, the other to communicate with the mobiles and fixed stations working in the search. A primary and alternate simplex frequency, not on the hunted xmtr frequency, should be designated for all communications between the Coordinator and the search team parties. Under ideal conditions, this should even be on another band to minimize interference problems on the "hunting frequency", but most persons are not set up with this possibility at this time. Pencils, paper, erasers, a protractor, and a straight edge must be available. At least one other person should be with the Coordinator to either plot the reports and/or communicate with the search units.

At least 3, but no more than 5 widely spaced fixed stations, with good beam antennas, should be designated to serve in establishing the initial "fix", and for guiding the mobiles. These stations must also be capable of communicating on the primary and alternate communications channels, plus monitoring the frequency on which the "hunted xmtr" is located. They also need maps, protractors, pencils, etc. A receiver equipped with some type of a signal strength meter is a "must" for this type of work.

No more than 5 mobiles should be placed in the field at any one time... beyond this, the Coordinator cannot keep up. Two or three are really sufficient. The mobiles should be staffed with at least 2 persons, with a third person certainly being worthwhile. Again, two rigs are needed - one to monitor the "hunting frequency", the other to be used in communications. A signal strength meter on the monitor rig is a must. The monitor rig should feed into a coaxial switch which can switch between two antennas - one a directional array, the other a vertical. An adjustable attenuator should be placed in line between the coax switch and the monitor rig. Maps, compasses, pencils, paper, clip boards, flashlights, extra fuses, short coax jumpers, coax adapters of all types, and spare money for coffee and gas should be available to the mobiles.

OBTAINING THE FIX:

The first task is to establish a preliminary "fix" on the hunted xmtr. This should be done by the 2 to 5 base stations by "peaking" their beams on the "hunted signal". The base stations should double check the directions of their beams with compasses prior to reporting beam azimuths to the Coordinator.

After establishing these peaks, the azimuths are reported to the Coordinator. These preliminary azimuths should cross within a circle 10 miles in diameter or less, depending on the distance from the base stations making the measurements.

The mobiles should then be dispatched to further refine the preliminary beam azimuths. This is done by having a mobile move out toward the "circle" and select points which are directly on the lines from the separate base stations to the "hunted xmtr". This establishes a set of known points close to the hunted xmtr to which lines can be drawn from the individual base stations. This should "tighten" the circle to an area with a diameter of at least one third that of the preliminary circle, depending again on the distance from the base stations to the circle.

PINPOINTING THE SOURCE

The mobiles should then be able to move into the "tightened" circle to start pinpointing the exact source. Once within this area, the signal will be very strong and will have to be attenuated in order to keep the meter on the monitor receiver from remaining against the pin.

By using the portable directional antennas, the mobiles will start triangulating and begin to close in on the source. Attenuators with a capability of attenuating up to 100 dB will be required in the transmission line to keep the meters on scale.

Triangulation gets extremely tough as you get close to the source. It may be necessary to switch to an omni antenna such as a simple ¼ wave vertical, and drive around and watch the meter. By inserting a large amount of attenuation, you can continually close-in on the source. The base stations which have there beams fixed on the source, can assist the mobiles by telling them when they have deviated off of the path to the "hunted xmtr".

PROBLEMS

There are several key problem areas with which you will have to contend. One is related to the type of antenna in use at the "hunted xmtr". If it is connected to a beam, or multiple beams, there will be severe nulls and peaks in the transmitted signal as you move across the front of the antenna array. If the mobile is watching his meter, he may think he is moving away from the signal when in fact he could be entering a null. If the hunted xmtr is on an omni antenna, these problems are reduced.

Another similar problem arises if the hunted transmitting antenna is located among large objects which tend to attenuate the signal, such as multistory buildings.

The worse problem in this area arises when the hunted transmitting antenna is being rotated, or if the effective radiated power is being varied by either changing antennas or power levels. This would be rare in a real hunt however.

It is also necessary to limit communications with the mobiles, and within the area of the mobiles, since off frequency signals may tend to dessence the receivers used in the mobiles and give them false signal strength readings. Low power should be used to help prevent this from occuring, plus idle chatter should be eliminated.

PLAN TO HUNT A TRANSMITTER ? ..... cont'd

CONCLUSIONS

Many clubs have conducted "hidden transmitter hunts", or "Fox Hunts", where everyone divides into groups and pursues the signal on their own. You may want to conduct some hunts using the single team approach, to determine how long it would take for the club to find a signal source.

There is a real "lack of good portable directional receiving antennas" that are suitable for use in transmitter hunts. Small beams and phased dipole arrays work quite well, but they are very bulky. Loop antennas are the right idea, but very few good plans seem to be available. If you have any plans for small directional antennas, please let me know and we will see that they get published.

It also becomes important as to the number of persons who have rigs capable of listening on the repeater input frequency, or some odd channel, plus that have a signal strength meter. Try conducting a hunt on some odd frequency rather than the popular simplex frequencies, and you will see what I mean. Of course, with the popularity of the synthesizers, this is deminishing.

If you have any thoughts, ideas, or suggestions for conducting hidden transmitter hunts, or if you have plans for antennas, attenuators, signal strength meters that can be placed on some of the rigs that are not so equipped, etc, please send them to the Editor.

Prepared by: Bill Parris, K4GHR

CLUB PROGRAMS..... Looking for a club program? How about a program on the Carolinas-Virginia Repeater Association? It would certainly be of interest to persons just getting started on VHF and for clubs that sponsor a repeater. Contact Bill Parris, K4GHR, 6210 Gothic Ct, Charlotte, NC 28210, for more details and about arranging to get a Representative to talk to your club.

WHAT'S HAPPENING??????? Special thanks is extended to the following amateurs who submitted news items, or replied to inquiries asking for news, for this issue of "The Repeater Journal". Without this type of response, we could not fill the need of our membership.

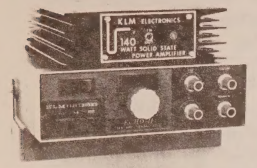
W4ACY, K4ARO, K4AVU, WB4DBB, WA4DBG, WB4EXW, WB4GPS, WA4IPQ, W4IRE, K4ITL, W4IZI, WA4JZX, WB4LWX, WA4MMP, WB4MOV, W4NTQ, WA4PEN, K4PQD, WB4ROI, WA4WTX.

No news from your area in this issue? Why not? If you don't send it in, there is just no way for the Editor to find it out..... Next issue will be published on November 1, 1975..... let's hear from you.

ACTIVITY ON TWO METERS BELOW 146 mHz..... WA4MMP

Two meter activity below 146 has started to boom, mainly due to the availability of moderate priced solid state transceivers that feature SSB & CW in addition to FM. (Multi 2000 & KLM Echo II) Organized activity can be heard every Tuesday evening on 145.025 when the Tidewater Two Meter Sideband Net meets at 2100. Typical Net coverage is from Philadelphia, Pa. down through Charlotte, NC..... suggested DX frequencies include 144.09 CW, 144.110 SSB, 145.025 SSB & CW (East Coast calling Frequency) and 145.200 AM.

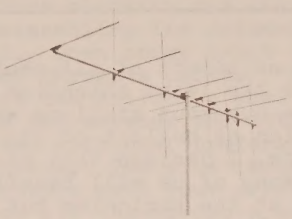
KLM ELECTRONICS



2 METER SSB/CW

- Echo II 2 meter SSB/CW transceiver
- 10 Watts PEP output
- Complete with microphone, two power cords & mobile mounting bracket

$389.00



2 METER CIRCULAR POLARITY

- Great for OSCAR, FM, AM and SSB
- Gain 9.5 dbd
- Complete with harness and balun . . . ready for 50 Ohm feedline

$54.95

KLM Accessories in stock (partial list)

KLM 144-150-12C Circularly polarized (for OSCAR)	$54.95
KLM 144-148-12 12 element DX antenna	43.95
KLM 144-148-16 16 element DX antenna	54.95
KLM Balun (recommended, optional)	13.95
KLM Two Antenna Coupler	19.95
KLM PA-10-140BL 2m 140 W linear (FM-CW-SSB)	199.95

(add $3.00 shipping per antenna or amplifier.)

emergency beacon corp.

EBC 144 JR **$599.00**

Fully synthesized covering 145.5 to 148.5 MHz in 5 kHz increments. Standard or reverse 600 kHz offsets up or down automatically. Split mode allows totally independent receive and transmit frequencies. Simplex operation available on either channel A or B.

DenTron

RADIO CO., INC.

160-10 AT
Super Tuner

Here is another Dentron first, a six band antenna tuner designed to solve virtually any matching problem you may have.

- Covers all bands 160 through 10 meters
- Includes heavy duty balun for balanced line

160-10 Super Tuner $119.50

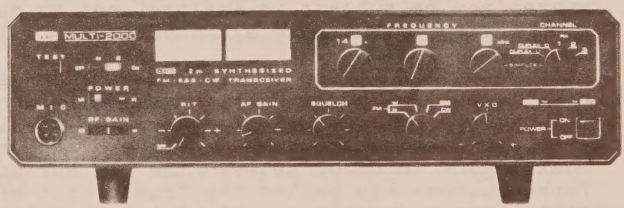
80-10 AT
Antenna Tuner

This is the low cost way to match almost any random length wire on the five most used HF bands.

- Covers 80 through 10 meters

Model 80-10 Antenna Tuner $49.50

The ITC MULTI-2000 CW/SSB/FM transceiver



Whether your interest is simplex, repeater, DX or OSCAR the new ITC MULTI-2000 lets you get into all the action on all of the band. Fully solid-state and employing modular construction, the MULTI-2000 enjoys features found in no other 2m transceiver.

Full one year written warranty – Introductory price $695

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TEKNIKLE TOPIX

Watson Gabriel, WB4EXW

This quarter's article deals with an aspect of all amateur radio installations that many times gets the least attention from us--namely our antennas. I imagine there are numerous stations whose effectiveness is hampered by improper installation or neglect of its antennas. After reading the article presented below, I decided that it should be presented to you guys in hopes that many of us will benefit from it. The article is edited just a tiny bit at the beginning but all of the pertinent information has been used. The Journal extends a big thank you to Bill Shaw, WA4MMP, for sending us this article which was featured in the TIDEWATER SSB NET REPORT of May, 1975, and thanks to WA4GPM for writing it. Read and take heed, fellow hams.

Although almost all of our antennas are made of aluminum and therefore not really the object of rust, the surface of the aluminum will corrode forming a sort of protective coating preventing further oxidation of the metal. This we all know is one of aluminum's most versatile characteristics and one of the chief reasons why it is used so extensively out of doors. However, the oxidation process never really stops, at best it can be said that it slows down, and over a long period of time more and more of the metal will oxidize. After several years, with the oxidation proceeding from both the inside and outside of the element or boom, it will eventually weaken it and if placed under severe stress, i.e. wind or ice, it will bend or if the oxidation is far enough advanced, the aluminum will become brittle and crack, usually resulting in the loss of the entire element or boom. When this happens you have no recourse but to buy a new piece at very high prices and start over again.

Other areas of antennas' structures are not as lenient as the aluminum elements. Unless you're lucky, most of the hareware that comes with your antenna will be some type of steel that is not really intended for outside use. And even if it is anodized (a coating that appears golden and which is galvanized to the bolt) or stainless steel, it is still subject to corrosion and rust. Over several years the hardware will weaken and be subject to failure, not to mention the problems involved with trying to unfreeze all those rusty bolts.

A third problem often overlooked is the rusty bolt effect... a phenomenon that occurs quite frequently aboard ship and many times in the average amateur set up. When two dissimilar metals are joined or even when two of the same metals are brought together and corrosion or rust begins to occur between the two surfaces, a non-linear junction is formed...commonly called the "rusty bolt effect." This rusty bolt effect will cause a certain amount of intermodulation distortion which will contribute to TVI as well as reduced transmitter performance and possibly poor receiver performance caused by high level signals from other services being rectified and giving you an RFI problem. However, proper care in preserving an antenna will eliminate problems in all three of the areas mentioned and as the platitude states...a stitch in time will save nine.

The following method I am going to describe is an adaptation of the methods used to preserve and maintain shipboard antennas in the U.S. Fleet. It's not fool-proof, but if done properly, there is no reason why an antenna could not last for 20 or 30 years with just a little touching up every 2 or 3 years.

First, all surfaces should be clean and totally free of all previous oxidation and corrosion. Use of a fine sandpaper or steel wool will do the job on the aluminum elements and steel wool will do the hardware. Do all this before assembling the antennas so there will not be any corners that you missed. Then spray paint the aluminum elements and boom with one coat of zinc chromate paint. "Krylon" manufactures this paint and its cost is about two dollars a can. After allowing the paint to dry and harden, assemble the antenna and attach the feedline. The antenna should then be painted with one, preferably two, coats of regular Krylon, the color of your choice. The zinc chromate is yellow so unless you want to impress your neighbors with your array, I suggest silver or grey for a finish coat. Spray all the hardware as well, making sure that there is no exposed bare metal.

The feedline and matching network also need to be sealed. RTV, a rubber-like adhesive made by Dow-Corning is not reccommended because of the problems involved in its removal and also because of the difficulty in obtaining a perfect seal. Permatex II or "Scotch-Guard" are the two sealing materials now used on ship to seal fittings and I reccommend them highly. Also, Dow-Corning makes a rubber compound now that cures tacky in several minutes and hard overnite. It's called Silicon Rubber Sealer and can be obtained in most hardware stores. Thoroughly cover the coaxial fitting where it joins the antenna or the coax if it is simply split and attached to the antenna with nuts and washers. Either way, coat the entire area so that water can not be allowed to seep into the coax (the chief reason why coax goes bad). Also seal the gamma arm, if that is the type of match you are using, making sure that the coaxial arm and associated hardware will be protected from the weather.

Rotor bolts and boom-to-mast clamps should also be painted. In the past I have used LPS, a spray which produces a gummy film on the metal, but it only lasts several months in the weather so I no longer reccommend it. Spray paint is still the best option, provided the metal is clean and free of dirt and previous corrosion. If all surfaces and nuts and bolts as well as joints are covered or sealed, the antenna should last a long time. I might also mention that elements and boom ends should be blocked to prevent water from getting inside. There would be no purpose in preserving the outside structure if corrosion were allowed to continue on the inside. After several years it would also be a good idea to take the antenna down and inspect it thoroughly and refurbish those areas that are not holding up to the weather. Hardware that is rusted should be replaced and repainted. The antenna itself should be cleaned with soap and water and repainted where necessary. If the above methods are followed, your antenna should give you many more years of service than you might expect...and after investing your money in your antenna system it is only natural that you would want it to last as long as possible.

KEEP THE COMMENTS COMIN' ..... A lot of very kind and generous comments have been received about the May issue of "The Repeater Journal". The 50 page publication has been a "hit" with most CVRA members. Persons joining the CVRA as Associate members during the next several months will receive a copy of this issue as long as the supply lasts..... so spread the word.

TECHNICAL IDEAS..... Do you have an idea or circuit that may be of interest to repeater operators or users (that's you guys with the PTT buttons) ? If you do, send it to Watson Gabriel, WB4EXW, 5936 Timberwood Trail, Kernersville, NC 27284. We also welcome control circuits and technical cures for repeater problems for possible distribution to repeater groups. Watson is the Technical Editor for "The Repeater Journal" and certainly is looking forward to receiving your inputs.

EXPRESS YOUR OPINIONS - WHERE IT COUNTS

The CVRA, through the excellent individual efforts of Don Harris, W4BUZ, our FCC Liason Representative, has filed comments on every Docket that has effected VHF/UHF operations in the past four years. Don's fine effeorts in this area deserve open notice to all members of the CVRA.

In reviewing the list of parties which filed comments on the two Dockets reviewed in this newsletter - 20112 (Automatic Control) and 20073 (Linking) - it becomes apparent that most amateurs do a lot of talking (and complaining) about the regulations, but when time comes for submitting comments, they don't follow through.

On 20112 (Control) a total of 70 comments were filed from the 250,000+ licensed amateurs in the US. I recognized three from our area -- the CVRA, The Pee Dee FM Repeater Assoc. (Florence, SC), and Chuck Bino, K4CJZ(Greensboro). Now just think of how many repeater owners you have heard complain about control -- and not but three comments from the CVRA area???

On 20073(Linking) a total of 23 comments were filed -- I recognize two from our area -- the CVRA and Richard Siff, WA4BUE(Norfolk).

Well, I have to place myself on the "goat" list too, for my name is not on the list of respondents either. It is also obvious that the names of the Editors of "CQ", "Ham Radio", "73", or "Worldradio News" are not there -- but the old standby, ARRL appears on them all. By the way, the FM Editor of "Ham Radio", J. J. O'Brien, did file for the Mt Vaca Radio Club.

So, for your regular subscription price to QST, ARRL puts forth the continuing effort to speak out for you, the amateur radio operator. We are quick to criticise ARRL for their stand on some of these dockets, but if the FCC only receives the number of comments indicated above, I wonder how many others bother to let ARRL know their opinions? How many CVRA members wrote to W4BUZ and let him know your position on any of these Dockets?

By the way, did you file comments on Docket 20282? I am going to be as interested in reading the list of persons submitting comments as I am in finding out what the FCC finally puts together.

SYNTHESIZER kit from VHF Engineering? Apparently so - and not too much in the future either. By the way, we are indeed fortunate to have VHF Engineering as an Advertiser in "The Repeater Journal". Give them your support, and tell them you saw the ad here.

6 METERS ..... There is a lot of pressure being applied to ARRL to reconsider its 6 Meter Repeater Band Plan. The 1 mHz spacing and the use of odd channel frequencies (ie 52.01, .03, etc) is apparently in direct conflict to current practice in a lot of the country. The VHF Repeater Advisory is currently active on this matter. If you have any thoughts and comments on a 6 meter Repeater plan, please contact Bill Parris, K4GHR, 6210 Gothic Ct., Charlotte, NC 28210. K4GHR is the 4th Call Area Representative to the VRAC, and would very much like to get your input. A request for similar ideas one year ago, prior to adoption of the current ARRL Plan, brought absolutely no input at all..... so put your thoughts together now.

DECODERS .... There has been considerable interest expressed about the possibility of the CVRA working with a club group on the development of a decoder for use in selective calling. It would be nice to have one on your rig so it would not activate unless there was an announcement to be made over your local repeater, or if someone was specifically calling you. Anyone interested in working on this project? Contact Ed Alderman, WA4PEN, 3101 Julian Ave., Raleigh, NC 27604.

REPORT FROM THE EASTERN DISTRICT

Director: Charles Durst, WA4WTX 4407 Sunny Ct Durham, NC 27705
Vice Dir: Danny Hampton, K4ITL 550 Granite St Raleigh, NC 27608

(RALEIGH, NC) ..... K4ITL Repeater, 28/88, still no WR call as yet, but Danny did get the word that his application is finally approved and is in Gettysburg awaiting the call to be issued. Seems like one of the major delays in the application was that the FCC said that Danny had incorrectly stated the height above mean sea level of the tower on which his antenna was mounted. Seems like the antenna is on a commercial radio station tower and Danny had taken the elevation listed on the radio station's license application as the correct elevation. The FCC returned the Repeater license application for correction of the elevation so Danny didn't know exactly what to do. Several phone calls to the FCC finally revealed that the FCC records indicated that the Commercial tower's elevation was one foot(1') different than that stated by K4ITL, so they had rejected his application. No wonder they are 12 weeks behind on their work.....tnx K4ITL

(BURLINGTON, NC) ..... WR4AIF, 07/67, got struck by lightning a few weeks ago but insurance is covering the cost of replacement. New heliax and a Phelps-Dodge duplexer are on order. The top antenna was apparently vaporized by the strike, with major damage of the cw identifier, autopatch, and duplexer also resulting. Plans are materializing to move the repeater to a new location atop Cane Mtn, north of Snow Camp, NC, which offers an elevation of around 430' HAAT. The machine is a solid state unit which runs from a 12 volt battery/charger combination type power supply. The battery offers a limited emergency power source when the power fails. When in its new location the transmitter will offer an ERP of around 100 watts. tnx W4IZI

(DURHAM, NC) ..... WR4AGC, 222.34/223.94, getting a lot of use now with 12 stations active. Machine is currently running 10 watts with plans to go to 75-90 watts in the Fall. tnx WB4DBB

(DURHAM, NC) .... Another 220 repeater in the works here. WB4TSM is putting a machine on 223.22/224.82. tnx WB4DBB

(DURHAM, NC) .... Proposed 6 meter repeater on 52.15/53.15, narrowband, 60 watts, GE Progress Line. Machine will be split site with the receiver in Person County, the transmitter in Hillsborough, linked on 450. Two 3dB Ringos will be used as the antenna system. tnx WB4DBB

(DURHAM, NC) .... WB4DBB says he is on 29.6 mHz FM now and having a ball when the band opens up. Equipment is cheap..... get on and try it.

(RALEIGH, NC) .... K4ITL Rptr, 28/88, now is operating single site from the WPTF tower near Cary. The former transmitter site on top of the BB&T building in the downtown area had to be given up. Danny is looking for another transmitter site now.

(SMITHFIELD, NC) ..... Work on WR4ALY, 43/03, seems to be continuing as a site has been finalized near Erwin, NC. Lyn hopes to have the repeater up during September. tnx WA4WTX

(RALEIGH, NC) .... K4HRN is having a ball building up a repeater for 223.34/224.94 using VHF Engineering kits. tnx WA4WTX

(FAYETTEVILLE, NC) ..... WR4ANN, 31/91, is now owned and operated by the Cape Fear ARS. WA5TVQ/4, Tom, has been appointed Repeater Coordination Manager--- he is responsible for all technical aspects of the repeater and will appoint a staff for maintaining and monitoring. See late news item from Fayetteville elsewhere in this newsletter.

NEW ARRL REPEATER DIRECTORY AVAILABLE

ARRL has published their 1975/76 Repeater Directory, and is available to ARRL members for 50¢. (non members $ 1.00). The address is ARRL Headquarters, 225 Main Street, Newington, Conn. 06111. The Directory is a composite of all repeaters which registered with ARRL up to May 1, 1975. Repeaters are listed by state, Canadian province, and foreign country. Also included are the recognized Repeater Band Plans, plus the names and addresses of the Area Frequency Coordinators. The current edition contains over 1600 US repeaters. This is up from around 1000 last year - a 60% growth.

A quick, and certainly unofficial, analysis of the repeaters listed in the directory reveals some interesting data. There are 1289 repeaters listed on two meters(843 last year, a 53% increase). 92% of the two meter repeaters are on the 27 "basic pairs" (shown below) using 600 kHz spacing. The remaining 8% are either on tertiary channels between these 27, or on odd splits other than 600 kHz. 250 repeaters are listed on the 14 channels in the 147 mHz range. (102 last year, a 245% increase) This reflects the growth experienced and the non availability of a 146 mHz pair available in many areas.

34/94 remains the most popular repeater channel with 163 repeaters (136 last yr) This represents 12.6% of all 2 meter repeaters(17.4% last yr).

Following is a distribution of the two meter repeaters by channel:

Freq.	Nr.	%	Freq.	Nr.	%	Freq.	Nr.	%	Freq.	Nr.	%
146.61	41	3.2	146.82	109	8.5	147.03	22	1.7	147.24	15	1.2
.64	50	3.9	.85	58	4.5	.06	17	1.3	.27	7	0.5
.67	51	4.0	.88	95	7.3	.09	27	2.1	.30	10	0.8
.70	34	2.6	.91	49	3.8	.12	19	1.5	.33	12	0.9
.73	51	4.0	.94	163	12.6	.15	23	1.8	.36	13	1.0
.76	139	10.8	.97	46	3.6	.18	14	1.1	.39	12	0.9
.79	57	4.4	147.00	34	2.6	.21	15	1.2	Misc.	106	8.2
										1289	100.0

Band:	50 mHz	146 mHz	220 mHz	450 mHz	1296 mHz
Nr. Rptrs:	63	1289	95	152	3

The three state area covered by the CVRA has 82 repeaters listed on 2 meters (64 last year) which represents 6.4% of the total in the country.

1975 ARRL NATIONAL CONVENTION... will be held September 12, 13, 14, 1975, at the Sheraton Inn in Reston, Va. near Dulles Airport. Contact Registration Chairman, PO Box 682, McLean, Va. 22101, for more details.

GOOD OPENING ON TWO METERS .... On Sunday afternoon, July 19, around 1630, two meters opened up to the Northeast in one of the best openings experienced from central North Carolina in recent months. K4PAJ in Statesville worked four (4) VE1's on 146.52 simplex using 10 watts and a 5 element beam. WB4SNA in Advance worked a W1 in Maine also on 52.

LATE NEWS FROM FAYETTEVILLE, NC..... The Cape Fear ARS is now operating WR4ANN on 31/91. Trustee is Gary Long, WB4MSB. This is the same repeater that used to be operated under the call of WR4ADK, whose Trustee is W4EHF. Bill, W4EHF, is considering putting WR4ADK on 220 mHz if he can create any interest in the area. tnx WB4FXM & W4EHF

COOPERATIVE EFFORT - A REPEATER COUNCIL AND THE FCC ?

Los Angeles, California, June 21, 1975: Amateurs in southern California were caught by surprise at the announcement that the Southern California Repeater Association had requested that the Federal Communications Commission join with them in the coordination of repeater systems to specific channel assignments. Rationale for this move was the ever increasing number of uncoordinated "renegade" systems jumping already assigned channel pairs, and the refusal of these system owners to cooperate in any way toward solving the problems that were thereby created. In addition, with all regular "30" kHz channel pairs already assigned and the "15" kHz tertiary splits almost all spoken for, the SCRA will soon be in a position of having to say "NO" to proposed new systems on two meters. It was felt that this "NO" answer toward a two meter allocation pair might cause the proposed new system to arbitrarily jump an existing assignment and thereby join the "band of renegades".

Briefly, the SCRA proposes a one year test period in which all Form 610 applications for southern California repeaters would initially be sent to the SCRA Technical Committee for evaluation, correction of errors and specific channel assignment. The 610 would then be forwarded to a specific FCC official assigned to handle this project for Commission action on the application. The Commission would then issue a "Distinctive" WR6 callsign to last for the duration of the test period and would be returned to the applicant with a copy of the SCRA sanction attached. If at any time during the test the applicant felt that he was not being treated fairly by the SCRA Technical Committee, he would have the right of "redress of grievances" directly to the Commission. During the test period, the SCRA would furnish the FCC with quarterly reports of its progress and would furnish them with detailed evaluation and recommendations at the end of the year. Finally, at the end of the test period, any conditions imposed would be dropped.

While this is a radical departure from the normal amateur radio stand of total self-regulation, on-the-air comments have been overwhelmingly in favor of this SCRA action. As of this writing some 24 hours after the announcement was made, your reporter has yet to hear a single negative comment on the proposal, and at the meeting where the announcement was made, the general membership voted to back the officers of SCRA by a wide margin in this matter. General consensus of opinion at that meeting was that it was far better for "us" to make such a move now then to wait for conditions to deteriorate to a point where the FCC would move in and make these decisions unilaterally.

Anyone wishing further information on the foregoing SCRA proposal can contact the Southern California Repeater Association, P.O. Box 2606, Culver City, California 90230. Full details of this and other matters concerning the SCRA June 1975 meeting will be covered starting in September's "Looking West" in *73*.

... WA6ITF

REPORT FROM THE MOUNTAIN DISTRICT

Director: Henry Holcomb, WB4MOV 513 Atlanta Ave. Lynchburg, Va. 24502
Vice Dir: Al Dyson, W4PDL 1848 Skycoe Dr. Salem, Va.24153

(ROANOKE, VA) ..... WR4AMQ, 13/73, currently in operation from the QTH of WA4HMP. Jim Clark, K4LZU, owner, indicates the machine will be moved to Reeds Mtn, east of Roanoke in about two months. The Reeds Mtn location will provide a wide coverage area as the HAAT will be 1500'. The machine will be equipped with an autopatch after it is moved and in operation.

REPORT FROM THE COASTAL DISTRICT

Director: Calvin Dempsey, WA4UQC 1604 West Canal St. Tarboro, NC 27886
Vice Dir: Eddie Sellers, W4NTQ 1004 N. Powell Blvd. Whiteville, NC 28472

(WILMINGTON, NC) .... The Wilmington VHF Association (WR4AHL, 22/82) held a covered dish supper at the QTH of Jerry Tate, K4GMP, recently. There were 43 persons at the gathering. tnx W4NTQ

(WILMINGTON, NC) .... WR4AHL, 22/82, covers very well into the Grand Strand area of South Carolina and up the coast of North Carolina to Moorehead City. All "sunbathers" are welcome to check in to the machine. tnx W4NTQ

(JACKSONVILLE, NC) .... WR4AJG/4, 40/00, not yet on the air -- awaiting receipt of equipment from Phelps-Dodge. tnx W4NTQ & WB4LWX

(BEULAVILLE & AURORA, NC) ..... WR4ADS, 34/94, and WR4ABQ, 34/94, operate under manual control and are on the air only when WA4UMH & W4EYZ are at home. tnx WB4LWX

ADDRESS CORRECTION REQUESTED

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